

Remarks

Favorable reconsideration in view of the herewith presented amendment and remarks is respectfully requested.

Claims 43-65 were pending in this application. Claims 43 -53, 56 and 65 are now cancelled in this amendment and claims 54, 55 and 57-64 are now pending.

Claim 65 was rejected under 35 USC 112, second paragraph as allegedly being indefinite. This claim has been cancelled. Therefore, this objection should now be considered moot.

Claims 43-46, 53 and 54 have been rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Oates. Claims 43, 52, 53, 54 and 60-64 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Muller further in view of Muller. Applicant traverses both of these rejections.

The Examiner should note that applicants have at this stage cancelled the claims to the element *per se*. In amending the claims, applicants have corrected the informalities addressed by the Examiner in the official action.

Applicants urge that the present official letter should not be a final rejection because the Examiner cited a new piece of prior art in the form of the Oates et al reference US 6,799,929. The Examiner is requested to withdraw the finality to permit applicants to amend their claims. If the Examiner decides to maintain the finality, applicants respectfully request that the amendments be entered since they could not have been made earlier. The amended claims are closely related to the claims that are currently on file and applicants believe that one could therefore reasonably present them in the context of a response to the final rejection.

So far as the Oates et al reference (“Oates”) is concerned, applicants have to agree with the Examiner that Oates does show a bolt element having a conical region, albeit a conical region

with a very shallow cone angle. Curiously, this conical region is not described anywhere in the Oates et al reference and also does not contribute in any way to the component assembly shown in the Oates et al reference.

The reason for this is probably to be found in the object underlying the design in the Oates reference. If one looks for example at Fig. 1 of the reference (prior art) then what this shows is an anti-rotation retainer or flag 30, the function of which is to hold a flange head bolt to prevent rotation thereof, the flange head bolt being fixed to the anti-rotation flag by staking the corners of the bolt head. In this connection, please refer to col. 1, lines 15 to 53, and in particular lines 39 to 53. The Examiner will see that the intention is for the bent tab 36 to engage in a hole provided in one of the components to be assembled so that the flag and the staked connection to be polygonal head of the bolt prevent the bolt from rotating on tightening of a nut. In this connection, applicants attach hereto sketch 1 a modified version of Fig. 6 of the Oates reference in which applicants have drawn in two further components A and B to show how the invention described there operates in practice. The Examiner will note that here the tab to which the arrow 54 points engages in a bore in the first component A and thus prevents the bolt rotating relative to the first component A when the nut C is tightened in order to secure the second component B to the first component A. Moreover, the Examiner will note that in the assembled condition the components A and B are trapped between the underside of the flange formed by the head part of the bolt and the topside of the nut in sketch 1.

For comparison purposes, applicants are also attaching as sketch 2 a modified version of Fig. 10 of the present application showing how the element provided here is used in practice. Here, the first component is the part labelled 140, which applicants have additionally labelled with the letter A, and the second component B is in this case an ear of a housing secured between

the nut element 162 and the free end face 139 at the first axial end of the body part 112 of the fastener element 110 of the present invention (using the terminology of claim 1). Thus, the Examiner can see that in the present invention the first component A is attached to the body part 112 of the fastener element by the riveted connection 150, and indeed has a conical region 142 which fully engages the conical surface 116 of the conical region of the body part 112 of the element. It also has a rim 148 at the narrow diameter end of its conical region 142 which is received in a ring recess formed by the rivet portion of the fastener element. Indeed, the recess is defined on both sides by the beaded over cylindrical rivet section of the fastener element in distinction to the situation on the Oates reference where the tab 54 is simply trapped between a locally deformed portion of the rivet section and the narrow end of the conical flange of the nut.

Applicants believe that the tab 54 of the Oates reference cannot be compared with the component 140 (A) of the present invention because the functions are quite different. In the Oates reference the tab 54 is simply intended to stop the bolt turning relative to the component A, whereas the joint is formed between the components A and B by clamping them together between the nut and the underside of the flange of the head part of the bolt. In contrast, in the present invention component 140 (A) is attached to one side of the head part of the bolt element, whereas the component B is attached to the other side of the head part of the element. Indeed the attachment of the component 140 (A) to the body part of the element not only prevents rotation of the fastener element relative to the component A directly, but also serves to axially secure the fastener element to the component A. In contrast, the tab 54 of the Oates reference does not have any axial securing function.

Thus, it should be clear from the foregoing that the component assembly claimed by the present invention is completely different from the component assembly of Oates. In the present

invention there are only two components A and B, in the component assembly of the Oates reference there are the two components A and B and additionally the tab 54. Moreover, in the present invention the conical surface region is exploited to ensure the strength of the connection of the fastener element to the first component 140 (A) whereas in the Oates reference the conical surface is not exploited at all.

For these reasons applicants urge the presently claimed component assembly must be considered to be patentable over the Oates reference. Reconsideration and withdrawal of this rejection is respectfully requested.

So far as the objection under 35 USC 103(a) is concerned, the Examiner is relying with respect to claim 54 on a combination of the Müller reference US 4,802,803 and the Müller reference US 4,459,073.

The Examiner seems to be correct when the Examiner says that the conical surface 110 in the '803 reference can be regarded as a conical surface (albeit with a significantly different conical angle from that used in the present invention). It can, however, be seen from the Fig. 7 that the conical part of the sheet metal component which engages the conical surface 110 is simply a conical face formed within a hole in the sheet metal part which is essentially completely flat at the location of the fastener. Moreover, this conical face of the sheet metal part has an axial length which corresponds to the thickness of the sheet metal part. In contrast, in the present invention, as now claimed in claim 54, the conical surface of the body part of the fastener element has an axial length corresponding to at least approximately twice the sheet metal thickness and the sheet metal panel has a conical boss having an internal conical surface which contacts the conical surface of the fastener element at least substantially over the full area of said

conical surface, i.e. also over an axial length corresponding to at least approximately twice the sheet metal thickness. This feature is simply not shown in the Müller '803 reference.

Moreover, this feature is also not shown in the Müller '073 reference. In addition, there is no conical surface present in the '073 reference. Furthermore, in the 073 reference the sheet metal panel 90 is trapped between the surface (32 in Fig. 6) of the flange of the fastener element and the beaded over outer end 74 of the rivet section. The rim of the recess formed in the sheet metal component is not received in a recess formed exclusively by the cylindrical rivet section as required by amended claim 54. Instead, the entire boss of the sheet metal component of the '073 reference is trapped between the surface 32 of the flange of the fastener element and the rivet bead formed from the cylindrical rivet section. This is highly significant. In the present invention there is no flange at the broader end of the conical surface of the fastener. This is brought out in claim 54 by the wording specifying "the generally cylindrical portion being dimensioned to have a diameter at apposition adjoining said larger diameter end that is no larger than said larger diameter end such that it does not form a ring flange at said larger diameter end".

In addition, claim 54 requires the rim at the smaller diameter end of the conical boss in the sheet metal panel to be received in a recess formed from the cylindrical rivet section. This is a significant departure from the prior art arrangement.

Thus, a combination of the Müller 803 and Müller 073 references does not lead to the presently claimed component assembly. In any event, applicants can see no reason why the person skilled in the art should be motivated to combine the two Müller references. There is no teaching in the references which would lead the artisan to do so. Each reference provides a complete teaching in its own right and applicants suggest that the objection raised by the

Examiner is one made with hindsight in the knowledge of the present invention and not an objection which would naturally arise from a joint reading of the two references.

For these reasons, applicants urge that this invention is not obvious under 35 USC 103 as suggested by the Examiner in the light of the Müller references.

The Examiner also rejected claims 44-51 and 55-59 under 35 US 103 as being unpatentable over modified Müller as applied to claims 43 and 54 and further in view of Matthews (US 3,117,611).

First of all, applicants have explained above why the two Müller references are not relevant to the present invention.

Although applicants do not deny that the Matthews reference can be regarded as having anti-rotation features, the arrangement is really very different from the present invention. The entire surface of the Matthews element is covered by a plurality of continuous serrations and not distinct noses on an otherwise conical surface. Moreover, the element of Matthews is not a rivet element, the element itself is not deformed. It is simply a so-called press-in element which is into engagement with the conical region of the sheet metal part without deformation of the fastener element itself. Thus, the combination asserted by the Examiner is a combination of dissimilar types of element. On the one hand, rivet elements of the Müller 803 and 073 references and, on the other hand, an element in accordance with Matthews, which is a so-called press-in element in which the material of the element is not deformed. The combination of the two distinct different types of elements is in applicants view not permissible and is again an objection which is raised in hindsight in the knowledge of the present invention.

Finally, the Examiner has rejected claim 65 as being unpatentable over modified Müller as applied to claims 54 and 63 above, and further in view of Ladourceur (US 5,441,417).

This objection is, however, moot because claim 65 has now been cancelled.

Applicants respectfully request reconsideration and withdrawal of the Examiner's §102 and §103(a) rejections.

It is believed that all of the present claims are in condition for allowance. The Examiner is requested to reconsider and withdraw all of the rejections made in the Official Action. Early and favorable action by the Examiner is earnestly solicited.

AUTHORIZATION

If the Examiner believes that issues may be resolved by telephone interview, the Examiner is respectfully urged to telephone the undersigned at (212) 309-1214. The undersigned may also be contacted by e-mail at gcr@hunton.com.

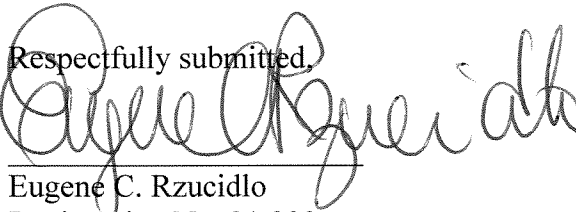
No additional fee is believed to be necessary. The Commissioner is hereby authorized to charge any additional fees which may be required for this amendment, or credit any overpayment to Deposit Account No. 50-2536.

In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No. 50-2536.

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By:

Respectfully submitted,


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